



Alien Species Transport

Large accumulations of derelict fishing gear can damage a vessel, entangle the propeller and result in a safety risk for those on board. Due to the size of many debris conglomerations, they are also a navigational hazard. Fishermen and other mariners help by removing and returning this trash to port.



Vessel Damage and Navigational Hazard

Specimens such as bottle caps, particularly plastic pieces which ingest marine debris, are often found.



Sugestion



How YOU Can Help

GET INVOLVED! Participate in local cleanups in your area!

REMEMBER that our land and sea are connected.

REDUCE the amount of waste you produce.

REUSE items when you can!
Choose reusable items over
disposable ones.

RECYCLE as much as possible!
Bottles, cans, cell phones, ink
cartridges, and many other
items can be recycled!



Wildlife Entanglement

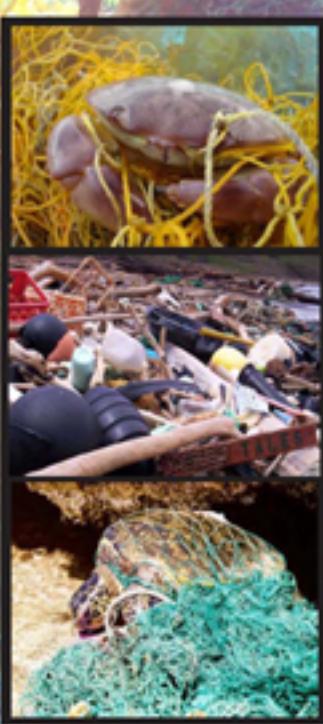
a reef in the Northwestem Hawaiian Islands.



Coral reefs are the basis of many of Hawaii's marine ecosystems. Marine debris can break and smother corals. Further damage can be caused with wave action and by blocking sunlight to corals.



Habitat Destruction



For more information
marinedebris.noaa.gov

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Printed on recycled paper with vegetable ink

Photos courtesy of James Watt, NOAA Fisheries Service, NOAA Hawaiian Islands Humpback Whale National Marine Sanctuary, State of Hawai'i, Hawai'i Wildlife Fund, and University of Hawai'i Sea Grant.

Background



The state of Hawai'i is an archipelago of islands, atolls, banks, and shoals extending over 1,500 miles in the Pacific Ocean. Hawai'i is home to endangered Hawaiian monk seals, sea turtles, dolphins, whales, many species of seabirds, and an abundance of coral reefs. Throughout Hawai'i, marine debris continues to present a hazard to marine life and habitat, as well as safe navigation.



Endangered Hawaiian monk seals (*Monachus schauinslandi*) are endemic to Hawai'i and threatened by entanglement in marine debris.

Sources of Marine Debris



DIRECT from ocean-based sources such as ships and fishing vessels.



INDIRECT from land-based sources when washed out to sea via streams and storm drains.

Degradation Timeline

Paper towel
2-4 weeks

Milk carton
3 months

Plywood
1-3 years

Cigarette filter
1-5 years

Plastic bag
10-20 years

Plastic cup
50 years

Rubber shoe sole
50-80 years

Aluminum can
80-200 years

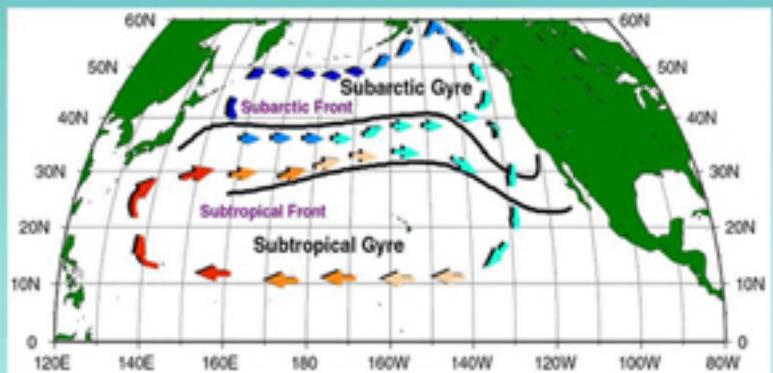
Plastic soda bottle
450 years

Disposable diaper
450 years

Monofilament fishing line
600 years

Glass bottle
1 million years

Movement of Marine Debris



The North Pacific, California, North Equatorial, and Kuroshio currents along with atmospheric winds generate the North Pacific Subtropical Gyre (shown above). Located in the center of this subtropical gyre, marine debris accumulates in Hawai'i (Timmers et al., 2005).

Timmers, M., C. Kishner, and M. Donohue. 2005. Marine Debris of the Northwestern Hawaiian Islands: Ghost Net Identification. Sea Grant: UNIH-SEAGRANT-AR-05-01.

From TRASH to ELECTRICITY

Removing and Recycling Marine Debris in Hawai'i



Derelict fishing gear, a form of marine debris, is removed from the land and nearshore waters of Hawai'i.



The debris is then hauled on board an awaiting boat.



As much as possible, the derelict net is sourced and identified.



The debris is brought to Honolulu Harbor where it is off-loaded.



The chopped nets are taken to Honolulu's H-Power facility where they are burned to create electricity.

100 tons of derelict net creates enough electricity to power 43 homes for a year!



Once there, the debris is chopped into small pieces suitable for incineration.



It is then taken to Schnitzer Steel Hawai'i Corporation's facility.

Partnerships

The National Oceanic and Atmospheric Administration (NOAA) works with other federal agencies, state and county departments, not-for-profit organizations, industry partners, private businesses, and community groups to ensure the success of all marine debris removal efforts.